Dr. Bernard Davis, 78, Professor And Leader in Genetics Research

Dr. Bernard D. Davis, a Harvard Medical School professor who was a pioneer in bacterial genetics research, the senior author of a standard medical textbook on microbiology and a widely known writer on the social implications of modern genetics, died on Jan. 14 at his home in Belmont, Mass. He was 78.

The cause of death was prostate cancer, said his wife, Elizabeth.

In a career that spanned nearly five decades, Dr. Davis led tuberculosis research for the United States Public Health Service, taught at New York University and Harvard, made major discoveries in genetics, wrote many articles and books and was the recipient of several scientific honors.

Decades before the explosion of knowledge in genetics, Dr. Davis, as a young scientist with the public health service in the late 1940's, made genetic discoveries and developed laboratory techniques that were fundamental to later advances in molecular biology, genetic engineering and biotechnology.

Achievement Speeded Research

He showed how genes are regulated in bacteria and was among the first to use penicillin to isolate mutants, an achievement that speeded the pace of research in the field, enabling scientists to quickly produce mutants that could be compared with normal bacteria to see how each used chemicals for growth.

Dr. Davis and his collaborators also discovered crucial aspects of the ways that bacteria synthesize proteins and develop resistance to drugs and on the ways that penicillin and other antibiotics kill bacteria.

In the 1960's Dr. Davis led a group of eminent scientists in writing a new textbook that emphasized the use of bacteria as model cells in the rapidly growing fields of genetics and molecular biology. The book, "Microbiology," became the definitive text on the subject in American medical schools for more than a generation and was published in many editions and languages.

Born in Franklin, Mass., he graduated from Harvard College in 1938 and from Harvard Medical School with high honors in 1940. He was with the public health service from 1942 to 1954 and was chairman of the department of pharmacology at New York University School of Medicine. He joined the Harvard faculty in 1957.

An obituary of Dr. Bernard D. Davis appeared on Jan. 17. Its account of his career was incomplete. This is a corrected version.

Regarded by colleagues as a gifted teacher whose lectures were models of analytic precision and clarity, Dr. Davis became chairman of the department of bacteriology and immunology at Harvard Medical School. From 1968 to 1984, when he retired, he was the Adele Lehman Professor of Bacterial Physiology.

His work led to his election to the National Academy of Sciences and the American Academy of Arts and Sciences. His numerous honors included the 1989 Hoechst-Roussel Award for his research on antibiotics and the 1989 Selman A. Waksman Award in Microbiology for his work in isolating bacterial mutants.

In the 1970's, Dr. Davis wrote for many scientific journals and newspapers, focusing on science and society and often taking up controversial topics. Among other things he argued that the debate over the uses of recombinant DNA and what critics regarded as the dangers of genetic engineering were overblown.

In 1976, he created a controversy by writing in The New England Journal of Medicine that academic standards in the nation's medical schools had dropped because of the admission of many minority students with substandard academic qualifications. He said that the admission of minorities was a laudable goal but that it should not be allowed to affect the standards of schools. Some critics called this view irresponsible, but defenders praised him for expressing his convictions, even when unpopular.

Dr. Davis later said he was talking about "a small fraction" of minority students and apologized for any misinterpretations. He included an account of the controversy in his 1986 book, "Storm Over Biology," a series of essays on objectivity in science.

Dr. Davis is survived by his wife, the former Elizabeth Menzel, whom he married in 1955; two sons, Jonathan, of San Francisco, and Franklin, of Newton, Mass.; a daughter, Kate, of Manhattan; a brother, Lawrence, of Boston; two sisters, Dr. Evelyn Waitzkin and Marion Cahan, both of Brookline, Mass., and two grandchildren.

Editors' Note

An obituary on Jan. 17 reported the death on Jan. 14 of Dr. Bernard D. Davis, a Harvard Medical School professor who was a pioneer in bacterial genetics. The first sentence and much of the obituary were devoted to a dispute over an article Dr. Davis wrote in 1976 about academic standards in the admission of minority students to medical schools.

Although the controversy was reported extensively in The Times at the time, and was therefore well represented in the newspaper's clipping file, it was not the dominant fact in Dr. Davis's career, as a number of scientists have explained in letters to The Times. The Jan. 17 obituary relied excessively on this file, in place of necessary reporting on the range of Dr. Davis's career.

A more complete obituary appears today on page 28.